Amendments to the claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1 (currently amended): An isolated nucleic acid encoding a protein molecule shown in ~~SEQ ID NO.~~ SEQ ID NO: 1.

2 (original): An isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule is a DNA molecule.

3 (currently amended): An isolated nucleic acid molecule of claim 2, wherein the nucleic acid molecule is a cDNA molecule~~, in particular a cDNA molecule comprising a nucleotide sequence shown in SEQ ID NO. 2 or SEQ ID NO. 3~~.

4 (currently amended): An isolated DNA molecule capable of hybridizing with the complement of the cDNA described in ~~SEQ ID NO.~~ SEQ ID NO: 2 or ~~SEQ ID NO.~~ SEQ ID NO: 3 ~~under stringent condition~~.

5 (previously presented): A vector comprising a nucleic acid molecule according to claim 1.

6 (original): A vector according to claim 5 wherein said vector is a plasmid, a virus or a bacteriophage.

7 (currently amended): A cell transformed with a nucleic acid molecule according to claim 1~~, wherein said cell is in particular a bacterial cell, a yeast cell, a mammalian cell, or an insect cell~~.

8 (currently amended): ~~A~~ An isolated protein molecule shown in ~~SEQ ID NO.~~ SEQ ID NO: 1.

9 (currently amended): A diagnostic target for detecting Alzheimer's disease comprising an isolated protein molecule shown in ~~SEQ ID NO.~~ SEQ ID NO: 1~~, or a fragment, or derivative, or variant thereof, for use as a diagnostic target for detecting a neurodegenerative disease, preferably Alzheimer's disease~~.

10 (currently amended): A screening target for reagents or compounds preventing, or treating, or ameliorating Alzheimer's disease comprising an isolated protein molecule shown in ~~SEQ ID NO.~~ SEQ ID NO: 1~~, or a fragment, or derivative, or variant thereof, for use as a screening target for reagents or compounds preventing, or treating, or ameliorating a neurodegenerative disease, preferably Alzheimer's disease~~.

11 (withdrawn): An antibody specifically immunoreactive with an immunogen, wherein said immunogen is a protein molecule shown in SEQ ID NO. 1, or a fragment, or derivative, or variant thereof.

12 (withdrawn): Use of an antibody of claim 11, for detecting the pathological state of a cell in a sample from a subject, comprising immunocytochemical staining of said cell with said antibody, wherein an altered degree of staining, or an altered staining pattern in said cell compared to a cell representing a known health status indicates a pathological state of said cell.

13 (currently amended): A method of diagnosing or prognosticating ~~a neurodegenerative~~ Alzheimer's disease in a subject, or determining whether a subject is at increased risk of developing said disease, comprising:

determining a level and/or an activity of

(i) a transcription product of the gene coding for hTARPP, and/or

(ii) a translation product of the gene coding for hTARPP, ~~and/or~~

~~(iii) a fragment, or derivative, or variant of said transcription or translation product,~~

in a sample from said subject and comparing said level and/or said activity to a reference value representing a known disease or health status, thereby diagnosing or prognosticating said ~~neurodegenerative~~ Alzheimer's disease in said subject, or determining whether said subject is at increased risk of developing ~~said neurodegenerative~~ Alzheimer's disease.

14 (currently amended): A method of monitoring the progression of ~~a neurodegenerative~~ Alzheimer's disease in a subject, comprising:

determining a level and/or an activity of

(i) a transcription product of the gene coding for hTARPP, and/or

(ii) a translation product of the gene coding for hTARPP, and/or

(iii) a fragment, or derivative, or variant of said transcription or translation product,

in a sample from said subject and comparing said level and/or said activity to a reference value representing a known disease or health status, thereby monitoring the progression ~~said neurodegenerative~~ Alzheimer's disease in said subject.

15 (currently amended): A method of evaluating a treatment for ~~said neurodegenerative~~ Alzheimer's disease,

comprising:

determining a level and/or an activity of

(i) a transcription product of the gene coding for hTARPP, and/or

(ii) a translation product of the gene coding for hTARPP, and/or

(iii) a fragment, or derivative, or variant of said transcription or translation product,

in a sample from a subject being treated for said disease and comparing said level and/or said activity to a reference value representing a known disease or health status, thereby evaluating said treatment for ~~said neurodegenerative~~ Alzheimer's disease.

16 (cancelled).

17 (currently amended): The method according to claim 13 wherein said sample comprises a cell, or a tissue, or a body fluid~~, in particular cerebrospinal fluid or blood~~.

18 (currently amended): The method according to claim 13 wherein said reference value is that of a level and/or an activity of

(i) a transcription product of the gene coding for hTARPP[,] and/or

(ii) a translation product of the gene coding for hTARPP~~, and/or~~

~~(iii) a fragment, or derivative, or variant of said transcription or translation product,~~

in a sample from a subject not suffering from ~~said neurodegenerative~~ Alzheimer's disease.

19 (currently amended): The method according to claim 13 wherein an alteration in the level and/or activity of a transcription product of the gene coding for hTARPP and/or a translation product of the gene coding for hTARPP ~~and/or a fragment, or derivative, or variant thereof,~~ in a sample cell, or tissue, or body fluid~~, in particular cerebrospinal fluid,~~ from said subject relative to a reference value representing a known health status indicates a diagnosis, or prognosis, or increased risk of Alzheimer's disease in said subject.

20 (currently amended): A kit for diagnosing or prognosticating ~~a neurodegenerative disease, in particular~~ Alzheimer's disease[,] in a subject, or determining the propensity or predisposition of a subject to develop ~~such a~~ Alzheimer's disease, said kit comprising:

(a) at least one reagent which is selected from the group consisting of

(i) reagents that selectively detect a transcription product of the gene coding for hTARPP, and

(ii) reagents that selectively detect a translation product of the gene coding for hTARPP, and

(b) an instruction for diagnosing, or prognosticating ~~a neurodegenerative disease, in particular~~ Alzheimer's disease[,] or determining the propensity or predisposition of a subject to develop ~~such a~~ Alzheimer's disease by

– detecting a level, or an activity, or both said level and said activity, of said transcription product and/or said translation product of the gene coding for hTARPP, in a sample from said subject; and

– diagnosing or prognosticating ~~a neurodegenerative disease, in particular~~ Alzheimer's disease[,] or determining the propensity or predisposition of said subject to develop ~~such a~~ Alzheimer's disease,

wherein a varied level, or activity, or both said level and said activity, of said transcription product and/or said translation product compared to a reference value representing a known health status, or wherein a level, or activity, or both said level and said activity, of said transcription product and/or said translation product similar or equal to a reference value representing a known disease status

indicates a diagnosis or prognosis of ~~a neurodegenerative disease, in particular~~ Alzheimer's disease[,] or an increased propensity or predisposition of developing ~~such a~~ Alzheimer's disease.

21 (withdrawn): A method of treating or preventing a neurodegenerative disease, in particular Alzheimer's disease, in a subject comprising administering to said subject in a therapeutically or prophylactically effective amount an agent or agents which directly or indirectly affect an activity and/or a level of (i) a gene coding for hTARPP, and/or (ii) a transcription product of the gene coding for hTARPP, and/or (iii) a translation product of the gene coding for hTARPP, and/or (iv) a fragment, or derivative, or variant of (i) to (iii).

22 (withdrawn): A modulator of an activity and/or of a level of at least one substance which is selected from the group consisting of (i) a gene coding for hTARPP, and/or (ii) a transcription product of the gene coding for hTARPP, and/or (iii) a translation product of the gene coding for hTARPP, and/or (iv) a fragment, or derivative, or variant of (i) to (iii).

23 (withdrawn): Use of a modulator of an activity and/or of a level of at least one substance which is selected from the group consisting of (i) a gene coding for hTARPP, and/or (ii) a transcription product of the gene coding for hTARPP, and/or (iii) a translation product of the gene coding for hTARPP, and/or (iv) a fragment, or derivative, or variant of (i) to (iii) for a preparation of a medicament for treating or preventing a neurodegenerative disease, in particular Alzheimer's disease.

24 (withdrawn): A recombinant, non-human animal comprising a non-native gene sequence coding for hTARPP or a fragment, or a derivative, or a variant thereof, said animal being obtainable by:

(i) providing a gene targeting construct comprising said gene sequence and a selectable marker sequence, and

(ii) introducing said targeting construct into a stem cell of a non-human animal, and

(iii) introducing said non-human animal stem cell into a non-human embryo, and

(iv) transplanting said embryo into a pseudopregnant non-human animal, and

(v) allowing said embryo to develop to term, and

(vi) identifying a genetically altered non-human animal whose genome comprises a modification of said gene sequence in both alleles, and

(vii) breeding the genetically altered non-human animal of step (vi) to obtain a genetically altered non-human animal whose genome comprises a modification of said endogenous gene, wherein said disruption results in said non-human animal exhibiting a predisposition to developing symptoms of a neurodegenerative disease or related diseases or disorders.

25 (withdrawn): Use of the recombinant, non-human animal according to claim 24 for screening, testing, and validating compounds, agents, and modulators in the development of diagnostics and therapeutics to treat neurodegenerative diseases, in particular Alzheimer's disease.

26 (withdrawn): An assay for screening for a modulator of neurodegenerative diseases, in particular Alzheimer's disease, or related diseases or disorders of one or more substances selected from the group consisting of

(i) a gene coding for hTARPP, and/or

(ii) a transcription product of the gene coding for hTARPP, and/or

(iii) a translation product of the gene coding for hTARPP, and/or

(iv) a fragment, or derivative, or variant of (i) to (iii),

said method comprising:

(a) contacting a cell with a test compound;

(b) measuring the activity and/or level of one or more substances recited in (i) to (iv);

(c) measuring the activity and/or level of one or more substances recited in (i) to (iv) in a control cell not contacted with said test compound; and

(d) comparing the levels and/or activities of the substance in the cells of step (b) and (c), wherein an alteration in the activity and/or level of substances in the contacted cells indicates that the test compound is a modulator of said diseases or disorders.

27 (new): The isolated nucleic acid molecule of claim 2, wherein the nucleic acid molecule is a cDNA molecule comprising a nucleotide sequence shown in SEQ ID NO: 2 or SEQ ID NO: 3.

28 (new): A cell transformed with a nucleic acid molecule according to claim 1, wherein said cell is a yeast cell, a mammalian cell, or an insect cell.

30 (new): The method according to claim 13 wherein said sample comprises cerebrospinal fluid or blood.

31 (new): The method according to claim 13 wherein an alteration in the level and/or activity of a transcription product of the gene coding for hTARPP and/or a translation product of the gene coding for hTARPP in a sample of cerebrospinal fluid from said subject relative to a reference value representing a known health status indicates a diagnosis, or prognosis, or increased risk of Alzheimer's disease in said subject.